

## **PROBLEMS OF MANAGEMENT OF RISK OF ENVIRONMENTAL POLLUTION IN LATVIA**

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**Abstract.** Estimation of probability and the size of possible damage, including damage to the third parties, is one of the important stages of risk management. Especially sharply there is a problem of definition of damage to an environment as in the majority of the countries this field is rigidly adjusted by legislation. The authors of the article analyze legislative norms in the field of the control and the responsibility for environmental pollution which act on the given moment in Latvia and the European Union; consider a problem of harmonization of acts of Latvia and EU. The authors give special attention to the Directive 2004/35/CE of the European parliament concerning prevention and liquidation of damage to environment, and also to the mechanism of obligatory financial guarantees and insurance which are necessary for developing to each state-member of EU according to the Directive.

**Keywords:** Management of risk, technogenical risks, Directive, environmental pollution, financial responsibility, indemnifications, insurance.

### **1. Introduction**

The problem of management of ecological risks, especially risk of environmental pollution, is one of the most actual for the modern world community. To balance interests of a society and the enterprises which activity is connected with ecological risks, it is necessary to combine methods of legislative and economic regulation. During activity of the enterprises, whose structure of activity is connected with technogenical risks, the probability of damage to material assets, a life and health of the population, and an environment increases [1].

Developing the program of an estimation and management of risk of environmental pollution, including a choice of methods of management of risk, the enterprise should consider norms of legal regulation as basic element of the external macro environment. First of all it is a question of requirements of the legislation, firstly, in the field of maintenance of preventive actions on decrease in a degree of risk, and secondly, on maintenance of the mechanism of indemnifications in case of damage to an environment.

As Latvia is a member of EU, for the Latvian enterprises the problem connected with harmonization of statutory acts of Latvia and the European Union are actual, including directives of EU in the field of protection of an environment. Monitoring of change of normative base will allow planning in due time necessary organizational and financial actions at the enterprise.

### **2. Requirements of the legislation of EU concerning prevention and indemnifications of environmental pollution.**

On April, 21st, 2004 the European parliament has accepted the Directive 2004/35/CE concerning prevention and liquidation of environment pollution. It is the first legal document of the European community realizing a principle "polluter – pays".

"Polluter-pays-principle" means:

- 1) operator responsible for the causation of an environmental loss or the imminent danger for such a loss, has to pay for remediation;
- 2) operators shall be forced to take all measures and to develop new methods to reduce the probability of occurrence of environmental losses.

Total remediation includes Primary, Complementary, Compensatory [2], what are describes in the Table1.

The Directive contains positions where the main emphasis is made on prevention of damage. Questions of the responsibility, including the responsibility on liquidation of environmental pollution, are adjusted in the Directive. The document stipulates reduction up to 2007 National legislations of the countries – members of the European union in conformity with its requirements, and also development up to 2010 of system" harmonized obligatory financial guarantees" at realization of the certain kinds of activity [1].

**Table 1.** Classification of remediation of environmental loss

Kind of remediation	The brief description
Primary	returns damaged sites into the original condition
Complementary	Equivalent measures at alternative site if remediation on the damaged site does not fully restore the damage (e.g. new biotope)
Compensatory	Additional measures to compensate interim/temporary losses of natural resources until full restoration of original condition

**Table 2.** Classification of ecological damages

Kind of damage	Description
Water damage	any damage that significantly adversely affects the ecological, chemical and/or quantitative status and/or ecological potential of bodies of water
Land damage:	any soil contamination that creates a significant risk of human health being adversely affected as a result of the direct or indirect introduction in, on or under the land, of substances, preparations, organisms or micro-organisms
Damage to protected species and natural habitats:	Any damage that has significant adverse effects on reaching or maintaining the favourable conservation status of such habitats or species in various directives (= ecological loss)

Fundamental principle of the Directive is that that the enterprise, whose activity has harmed to an environment or can potentially put, should bear the financial responsibility. Positions of the Directive are based on the mechanism of the responsibility according to norms of public law operating in a number of the European countries – when bodies of the government are authorized to expose requirements to polluters under indemnification for caused damage to an environment.

The fundamental aspects of the Directive:

- 1) the state bodies are obliged to take necessary measures on liquidation of harm to an environment; On the other hand, any public organizations which are having for an object protection of an environment, have the right to demand from the authorized bodies and to supervise acceptance of such measures;
- 2) the subject, whose activity was the reason of harm for an environment, bears the financial responsibility;
- 3) the system of obligatory financial guarantees, first of all, insurances, for especially hazardous kinds of activity specified in the Directive.

The following activities are considered as hazardous activities:

- Industrial activities where an environmental permit is required
- Waste management operations (collection, handling, discovery, disposal, landfill sites, incineration plants etc.);
- Discharge into and contamination of surface – and ground – water;
- Transportation of dangerous/polluting goods (incl. waste);
- Handling and usage of dangerous substances/preparations, pesticides and plant protection/biocidal products;
- Any use of genetically modified organism [3].

According to Directive are legally protected: water, land, protected species and natural habitats. Problems of application of obligatory environmental pollution liability insurance as mechanism of financial guarantees.

In obligatory and at voluntary insurance of ecological risks some kinds of insurance treaties are used. At insurance of the liability for corporal and property damage to the third parties, two basic policies are used: the policy of insurance of general responsibility (comprehensive general liability, or CGL); the policy of insurance of the responsibility for damage to an environment (environmental impairment liability, or EIL) [4].

Both of the policy are widely applied in practice of insurance of enterprise activity and intended not only for the firms falling under rules of obligatory insurance. From the point of view of an insurance covering there are two forms of policies: on the basis of claims (claims-made policy); on the basis of taking place events (occurrence-made policy).

In the first case the insurance cover is given under all claims which are shown during validity of the policy. Insurers use this form to protect themselves from claims, which can be shown in many years after the occurred event and by that to lower uncertainty at an estimation of possible number of claims and the size of damage. In the second – losses on the events which have occurred during validity of the policy, irrespective of time of presentation of the claim about compensation of damage are compensated.

Validity of insurance treaty can be specified by inclusion of corresponding items. So, inclusion of item on “the period of detection” (discovery period) or about “prolongation of term of the application” (extended reporting period) in the policies constructed on the basis of claims, enables the insurant for the additional premium to prolong action of the policy

regarding the losses suffered during the basic term, but not issued in this period properly

Position according to which the losses which have occurred before certain date in the past (retroactive date) are not compensated can be included in the same policy.

Policies of insurance of general responsibility, or policies CGL, are used already more half a 20th century. Their purpose – insurance of all kinds of the civil responsibility of businessmen for the corporal and property damage, put to the third parties (except for specially stipulated kinds of damage), as a result of possession of the property, realization of activity or from made production.

The risks covered by the standard treaty, remain during all these years practically constant, except for radiating damage; ecological risks, however an insurance covering in case of sudden events are excluded all was possible to get for the additional premium; many insurance companies have completely excluded a covering of any damage connected with environmental contamination from policies CGL.

Policies of insurance of the responsibility for damage to an environment, or policies EIL, are intended for a covering of the damage put by pollution to the third parties. The list of insured risks is presented in EIL much already, than in CGL. In policies EIL the form of an insurance covering on the basis of claims is used and the damage to the third parties which have resulted long events becomes covered. In one policy EIL insurance of the responsibility for the damage put as a result of sudden also can be stipulated [4].

Market EIL as well as market CGL, has essentially changed in the in 80-s' years of 20 centuries. Many companies have ceased to carry out this kind of insurance, others have considerably increased premiums and have reduced the sums of an insurance covering.

The insurance companies of Latvia offer similar conditions of insurance. It means, that insurance policies CGL exclude compensation of damage to an environment, and development of special conditions of insurance is necessary for insurance of the given risks.

One of most prominent aspects is connected by that insurance can play in the near future a role of the financial guarantor of the new mechanism of the responsibility, i.e. insurance of the responsibility for environmental contamination (ecological risks) becomes obligatory. For this purpose it is necessary first, to bring respective alterations in existing legislation acts and to accept new, and secondly, to participants of the insurance market to develop conditions of insurance according to statutory acts.

Development of conditions assumes first of all a precise definition of such basic insurance treaty provisions as: a limit of the responsibility, insurance risk, an insurance covering (only sudden and casual event, or the limited covering of accumulated harm, or a full covering).

At the same time insurance as the mechanism of financial guarantees cannot cover completely possible losses because of the following reasons:

- not all cases of pollution will be recognized insurance, for example, deliberate pollution for which the criminal liability is stipulated;
- the damage will exceed the insurance sums established in the contract of insurance.

Risks of change of technically scientific and economic aspects of preservation of the environment accept such forms that do adaptation to them of insurance branch especially complex. For example, constantly there is new knowledge of character of influence of many substances on components of an environment. In this connection it is possible to assume [5].

Those conditions of insurance of the ecological responsibility are:

- presence concrete and measured damage to an environment; time of an insurance case should not be predicted and event should not be deliberate;
- presence of a relationship of cause and effect between put (or potential) damage and revealed polluter;
- economic efficiency: private insurers should be able to appoint the insurance premium according to the accepted risks, the premium to provide profitability of insurance for the long period.

To estimate probability and volume of event, the sufficient saved up experience and statistical data is necessary for insurers. Concerning ecological damage it is necessary to spend distinction between two spheres at an estimation of probability of event; the risk has sudden and casual character and in case of accumulated harm.

Concerning casual and sudden damage, insurers estimating probability of event, can use statistical data, for example, on fires, explosions, etc. Then, generalizing available data about the legal responsibility, legal regulation of designing and operation of the industrial enterprises, properties of known substances, insurers can come to enough exact picture of risk which they insure [5].

The situation becomes more complex when event is not sudden and casual. In this case the insurer should deal with emissions which collect gradually: for example, at the industrial enterprise for years of the normal, accident-free, resolved activity. Originally such case cannot be recognized by an event and on this basis cannot be carried to the concrete time period.

### **3. The possible mechanism of realization of obligatory environmental pollution liability insurance in Latvia**

Till 2010 of the legislation of the countries of EU members should be brought into accord with requirements of the Directive.

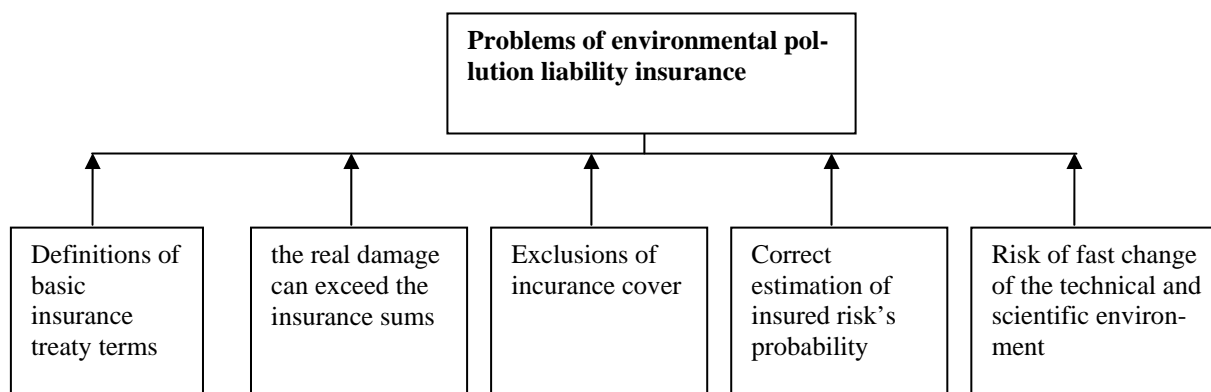


Fig 1. The main problems of application of obligatory environmental pollution liability insurance

Environmental Impact Assessment (EIA) is one of the environmental policy instruments that covers and outreaches whole spectrum of environmental field. EIA should be conceived as procedure that is applied to assess possible environmental impact of the intended activity and elaborate proposals for prevention or reduction of unfavorable impact.

Requirements for procedure for environmental impact assessment in Latvia are established by the law "On Environmental Impact Assessment" [6] and Cabinet Regulations. These documents are harmonized with the respective European Union Directives. The law and its subordinated regulations defines sequence of implementation of the assessment, explains rights, obligations and liabilities of all concerned parties, as well as describes result of the environmental impact assessment and its influence towards decision-making procedure.

Comparison of positions of the Directive with the existing legislation of Latvia has allowed revealing the following:

- separate aspects of preservation of the environment, such as land protection water resources, waste management, the dangerous activity, dangerous substances, air pollution, quality of air, an agriculture and forestry, fishery and regional planning, are full adjusted already enough;
- and, on the contrary, damage to protected species and natural habitats as it is offered in the document, are new to the majority of the countries, and Latvia also, and the instruction demands toughening the legislation in these areas.
- some dangerous activities (but not everything, that are required in the Directive) are regulated and are obliged to insure the responsibility for environmental pollution.

There is a state body in Latvia which is responsible for questions Environmental Impact Assessment and integrated pollution prevention and control. It is Environment State Bureau. The purpose of the integrated pollution prevention and control (IPPC) is to reduce impact on the environment caused by activities of the largest industrial installations via reduction of

air, water and soil pollution, waste minimization and rational use of natural resources and energy.

Integrated pollution prevention and control requires Latvian industries to upgrade production technologies and to operate in an environmentally friendly manner. This approach also promotes different cooperation with public and municipal authorities, as the enterprise should obtain a single permit, which conditions cover all the following issues: energy efficiency and safety measures, discharges into water and air emissions and waste management measures.

The enterprises of Latvia, whose activity is connected with risk of environmental contamination, are classified on 3 groups – A, B and C. The permit (license) is stipulated by each of groups

The Integrated pollution prevention and control increases efficiency of the permitting procedure and compliance with the permit conditions. Integrated permits are publicly available, so the whole permitting process becomes more transparent. In opinion of authors, the mechanism of realization and the control of obligatory insurance could be realized at licensing, i.e. presence of the contract of obligatory insurance should be an obligatory condition of reception of the license. About the parties of the state the control would carry out Environment State Bureau.

#### 4. Conclusions

Authors have analyzed the problems connected with regulation of environmental pollution risk. During harmonization of the legislation of Latvia as well as other countries- EU members, there can be a necessity of application of obligatory insurance of this risk

Obligatory insurance of risk of environmental pollution according to requirements of the Directive2004/35/CE puts a number of problems and for state bodies, and for insurance companies, and for enterprises – sources of risk:

- 1) for state bodies, Insurance Associations – to develop new acts and to make amendments in existing with the purpose to harmonize them with requirements of Directive;

- 2) for insurance companies – to develop methodology of an estimation of risk, insurance covering, the mechanism of calculation and payment of indemnifications and other provisions of insurance treaty;
- 3) for the enterprises it first of all problems of additional financing.

Given recommendations can be applied by preparation and discussion of projects of legislation acts in the field of obligatory insurance of ecological risks, and also in the private insurance companies to planning and development of insurance products.

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